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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/602,589

06/25/2003

Tien-Yuan Chien

YUN 189

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08/31/2005

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EXAMINER

SHAPIRO, JEFFERY A

ART UNIT

PAPER NUMBER

3653

DATE MAILED: 08/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/602,589

Applicant(s)

CHIEN ET AL.

Examiner

Jeffrey A. Shapiro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities.

In Claim 6, last line, "id" should be "is". Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 1 recites the limitation "banknote" in lines 3 and 6. There is insufficient antecedent basis for this limitation in the claim.

5. In Claim 4, it is unclear what is "for...enabling said control unit" as recited in lines 9-12.

6. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed.

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Cir. 1999). The term "transmission module" in Claim 4 is used by the claim to mean "a transporting mechanism", while the accepted meaning is "to send or transmit a signal." The term is indefinite because the specification does not clearly redefine the term.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Laskowski et al (US 6,101,266). Laskowski discloses an insertion slot (14), a conveying/banknote holding down mechanism (12), a banknote verification assembly (10), a transmitter and receiver holder base with banknote passage (see figures 2 and 3) with optical transmitters (32) and optical receivers (20 and 22), controller (128) and communication interface module (132), as described in col. 21, lines 60-65. Note that it is inherent that Laskowski's apparatus would be used in a housing with a money box to hold the validated bills. It is also considered inherent that Laskowski's apparatus' LED emitters (32) would work substantially the same as Applicant's apparatus regardless of the radiation emitted. See Laskowski, col. 6, lines 35-46 in which it is stated that "other types of wavelengths of emitters may be used." Note also that ultraviolet light is routinely used to detect identification strips on bills (see col. 6, lines 17-20) and that ultraviolet light is also used to determine fluorescence of the bills, as US banknotes are

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designed not to fluoresce while counterfeit bills do. Further note that it is inherent that electric power is used to run Laskowski's optical transmitter and optical receiver modules.

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Mennie et al (US 6,731,785 B1). Mennie discloses a housing (see figure 3b), an insertion slot (14), a conveying/banknote holding down mechanism (12), a money box (214a-f), a banknote verification assembly (70 and 581), a transmitter (342) and receiver holder base (300) with banknote passage (see figure 5b) with ultraviolet optical transmitter (342) and optical receiver (340), controller (1712) (see figure 17), communications interface (32). Further regarding Claim 3, see col. 5, lines 18-33 and note also figure 17, which illustrates a digital-to-analog converter and analog-to-digital-converter, both of which can be construed as communications interfaces. Regarding Claim 4, note that Mennie's device inherently uses electrical power to run the previously mentioned optical transmitter and receiver circuits.

Claim Rejections - 35 USC § 103

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12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mennie in view of Sawtell (US 5,949,225). Mennie discloses the banknote authenticating apparatus described above. Mennie does not expressly disclose, but Sawtell discloses an optical transmitter module (200) which drives LED (208) coupled to an npn transistor (232) collector terminal and a resistor (242) connected to both the transistor emitter and a grounding loop. The base of the transistor is connected to the output of opamp (220), which can be construed to be a control unit. See Sawtell, fig. 2.

Sawtell further discloses an optical receiver module (306) with shunt resistor (342) connected to both the transistor (310) emitter terminal and the control unit, construed as opamp input (338), and the opposite resistor end being connected to a ground loop. See Sawtell, figure 3.

Both Mennie and Sawtell are considered analogous art because they both concern optoelectric emitter and receiver circuits.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have ultraviolet transmitter module (200) and ultraviolet receiver module (306) to fluoresce notes passing through Mennie's banknote processing system.

The suggestion/motivation for using Sawtell's transmitter module (200) would have been to produce a gain independently controllable from that of the optocoupler. See Sawtell col. 5, lines 64-67.

The suggestion/motivation for using Sawtell's receiver module (306) would have been that this receiver module is a typical phototransistor circuit as is well-known in the art, to sense ultraviolet light.

In the alternative, note that it would have been obvious to one ordinarily skilled in the art to have used Sawtell's entire feedback circuit (300), including transmitter/drive circuit (304), optocoupler (302), and receiver module (306) in Mennie's apparatus.

The suggestion/motivation would have been to use an ultraviolet emitting/detection module with an LED drive circuit that is "adjustable independently of the optocoupler" and that "compensates for the inherent and operational fluctuations in the gain of the optocoupler."

Note also that feedback circuit (300) is considered at the very least, a functional equivalent of Applicant's feedback circuit described in claims 5 and 6.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is (571)272-6943. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

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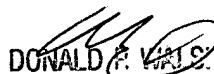
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald P. Walsh can be reached on (571)272-6944. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey A. Shapiro
Examiner
Art Unit 3653

August 27, 2005



DONALD P. WALSH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600